

The Importance of Physical Activity for School Age Children

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Seattle Children's Hospital
Public Health Seattle & King County

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- Master Trainer for "I Am Moving, I Am Learning"
- Author and Speaker
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- Handouts
- Physical Limitation
- Self Regulate



This Training is About...



***Engaging
School Age
Children
in
Physical Activity
Every Day!***

The Issue....



Kids have stopped moving!

~Only 6 states require Physical Education in every grade

~Only 20% of school districts require daily recess

~Only 1 in 3 children are active every day

<http://www.letsmove.gov/resources>

We Know....



Active students do better!

~Increased concentration

~More alert

~Improved attendance

~Less discipline issues



<http://www.letsmove.gov/resources>

Our Focus....



Create early, positive physical activity experiences for kids.



Today's Agenda

- The Need for Physical Activity
- The Incredible Mind-Body Connection
- The School Connection
- Best Practices
- Active Physical Play
- Applying Modifications with School Age Children
- Physical Activity Policy
- Conclusion



The Need for Physical Activity in Childhood



The Importance of Play and PA

Play and PA develops:

Motor development
Cognitive skills
Social skills
Emotional development
School readiness skills

And.... Helps to prevent childhood obesity



Icebreaker Activity

Find a partner,
Tell them your favorite fruit!
Tell them your favorite veggie!



My favorite fruit is...



My favorite fruit is...

What did we learn?



Through Play, We Learn!



- ✓ Talked about fruit and vegetables
- ✓ Worked cooperatively
- ✓ Socialized with new people
- ✓ Experienced physical activity
- ✓ Problem solved
- ✓ Hand-eye coordination
- ✓ Created new ways to move



And much, much more...

Raising a Healthier Generation



Childhood Obesity is a Public Health Threat

In the last 30 years:

- * **Preschool** obesity rates have **doubled**
- * **Adolescent** obesity rates have **doubled**
- * **Childhood** obesity rates have **tripled**



- **Obesity** between ages **2 to 5** has more than **doubled** since 1980, from **5.0%** to **12.4%**
- Approximately **17% (or 12.5 million)** of **children and adolescents** aged **2-19** years are **obese**.
- **80% of children** who are **overweight** between ages 10 to 15 years grow up to become **obese 25 year-old**

www.cdc.gov

Consequences of Childhood Obesity

- ⇒ High blood pressure and high cholesterol (CVD)- 70% of obese children had at least one CVD risk factor, 39% had two or more
- ⇒ **Increased risk type 2 diabetes**
- ⇒ Breathing problems - such as sleep apnea, and asthma
- ⇒ **Joint problems and musculoskeletal discomfort**
- ⇒ Greater risk of social and psychological problems, poor self-esteem, which can continue into adulthood

www.cdc.gov



A Health Crisis

Fact: Children born in the year 2001 are expected to have a shorter lifespan than their parents (CDC)

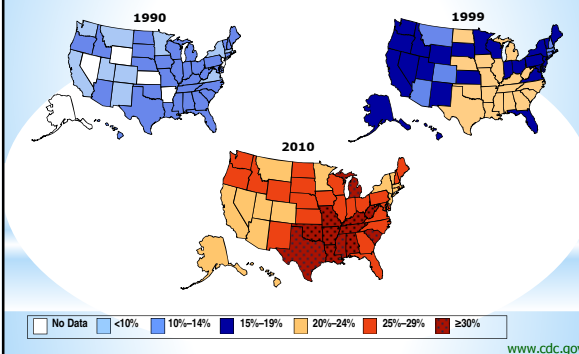
Fact: 1 in 3 children are expected to have Type II Diabetes (CDC)

Our Children Inherit More Than Our Genes

They Inherit Our Lifestyles...

Obesity Trends* Among U.S. Adults BRFSS, 1990, 1999, 2010

(*BMI ≥ 30 , or about 30 lbs. overweight for 5'4" person)



Great News!

Overall obesity rates among 2-4 years
declined in 2009 (14.7%) to 2010 (14.4%)
Source: www.CDC.gov

Obesity rates in young seen as **falling** in
several cities (New York City = \approx 5.5%,
Philadelphia = \approx 5%, \approx Los Angeles = 3%)
Source: *New York Times*, Dec. 2012

How much PHYSICAL ACTIVITY?



Daily Physical Activity Recommendations

PA should be age-appropriate, enjoyable, and include variety.



Daily Physical Activity Recommendations



Youth Physical Activity Guidelines:

⇒ Children and adolescents (6-17) should have 60 minutes or more of daily physical activity (PA)

-Aerobic: 60+ min./day of MVPA, should include vigorous-intensity 3x/week

-Muscle-strengthening and bone-strengthening: part of their daily 60+ min., at least 3 days/week

PA should be age-appropriate, enjoyable, and include variety.

Source: U.S. Department of Health and Human Services. Physical Activity Guidelines for Americans. Washington, DC: U.S. Department of Health and Human Services; 2008.

www.cdc.gov

Daily Physical Activity Recommendations



- Accumulate **60+ Minutes** a day on all or most days of the week
- Several bouts of PA lasting 15 minutes
- A **variety** of age-appropriate activities
- Extended periods of **inactivity** are discouraged

www.aahperd.org/naspe/standards/nationalGuidelines/PA-Children-5-12.cfm

Goals for



1. Physical Activity:

1-2 hours of PA throughout the day, include outside play when possible



2. Screen Time

No screen time for children under 2 years (AAP recommendation)



3. Food



4. Beverages



5. Infant Feeding

Children age 2+, limit screen time to no more than 30 minutes/week during child care. Work with parents/caregivers to have no more than 1-2 hours of quality screen time per day

www.letsmove.gov
www.healthykidshealthyfuture.org

Washington State K-12 Health and Fitness Learning Standards, December 2008

WAC 392-410-135 Physical education - Grade school requirement.

*Grades 1-8, an average of at least **one hundred instructional minutes per week per year** in physical education shall be required of all pupils in the grade school program

***Recess**, as normally provided, **cannot be used** to meet the requirement of an average of 100 minutes per week of instruction in physical education. Recess provides unstructured play opportunities that allow children to engage in physical activity.

<http://www.k12.wa.us/healthfitness/standards-gles/healthfitnessstatestandards.pdf>

Adult Recommendations?

For One Week:

150 Minutes of Moderate PA

OR

75 Minutes of Vigorous PA



10 minutes at a time

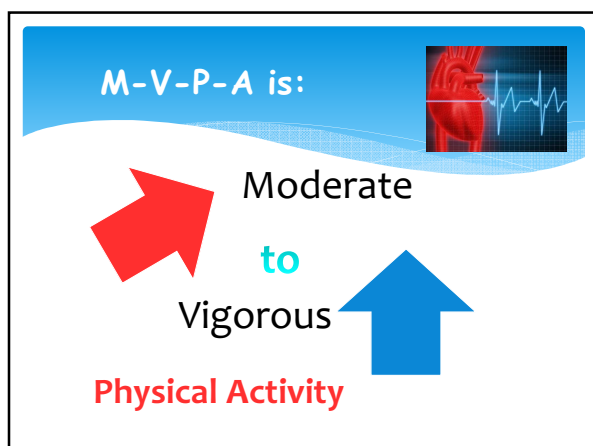
PHYSICAL ACTIVITY keeps us...



HEALTHY!

A Major Concept to Share...

M-V-P-A



The HEART is a: Muscle!

Size of
your fist
Muscle fibers
It needs PA

Moderate is:

Walking
Raking
Gardening
Playing

Elevated heart rate
but able to talk

Vigorous is:

Swimming
Push Mowing the Lawn
Running
Climbing Stairs

Hard to talk
while doing activity

Teaching Children


How do we explain
this to children?

How do we teach
fitness to children?

Happy Hearts!

Teach children how to
have Happy Hearts

Build a Bridge



Bridge
Una puente

Tunnel
Un tunnel


Road
Un camino

Cave
Una cueva

Tower
Una torre

Wall
Una pared

Diagram courtesy of Angela Russ



It's Time to Clean!

Find a Partner!

One partner is a 🍌


The other is a 🍓



What do we eat that is red?
What do we eat that is purple?



Happy Heart Time



What is your heart saying?


QUESTION...

How can YOU facilitate MVPA with children?




➡ **CHILDREN WANT TO BE PHYSICALLY ACTIVE!**

A good leader will help children to be physically active by helping them to feel connected to the afterschool program and by helping them to feel competent in the activities they perform.



<http://www.ecu.edu/cs-hhp/exss/upload/After-School-Energizers.pdf>

THE FOUR-WORD GAME




→ IMPORTANT CHARACTERISTICS OF A YOUTH LEADER

1. Enthusiasm and excitement for the program
2. Ability to manage a large group of children
3. Good organizational and communication skills
4. Reliable and passionate towards working with kids

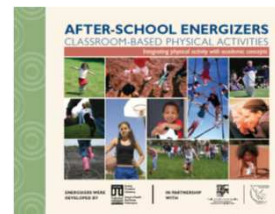


EAST CAROLINA UNIVERSITY

Check it Out!



Resource
Tool
Games



<http://www.ecu.edu/cs-hhp/exss/upload/After-School-Energizers.pdf>

Promoting Age-Appropriate Motor Skills and Development

MOVEMENT CHARTS

Quality Physical Activity

Fundamental Movement Skills		
<i>Locomotor Skills</i>	<i>Non-Locomotor</i>	<i>Object Control Skills</i>
Walk / March	Pushing / Pulling	Rolling
Run / Jog	Bending / Stretching	Tossing
Hop	Twisting / Turning	Throwing
Jump	Swinging / Swaying	Catching
Gallop	Sinking / Rising	Bouncing
Skip	Small / Big	Dribbling
Side-slide	Wide / Thin	Kicking
Leap	Standing / Kneeling	Striking
Climb	Shaking	Trapping
Crawl		

Quality of Movement

Can you show me your best..?

HOP



JUMP



Locomotor Skills Creative & Cooperative Play/MVPA

- ✓ Choose any music
- ✓ Add a motor skill

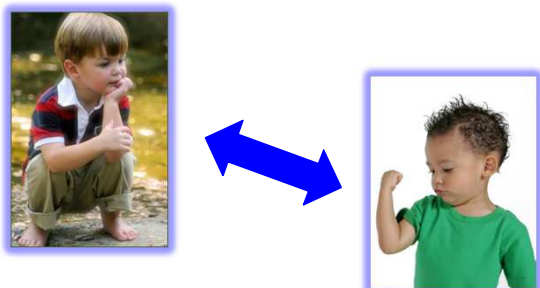


Locomotor skills
Pathway
Level
Something goofy



Walk	<i>Caminar</i>
Run	<i>Correr</i>
Jump	<i>Brincar</i>
Hop	<i>Saltar</i>
Gallop	<i>Galopar</i>
Skip	<i>Saltito</i>
Side-Step	<i>Paso al Lado</i>

The Mind-Body Connection



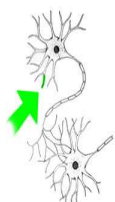
The Brain

- At birth, 100 billion brain cells communicate through tiny connections that form networks
- There are 15,000 connections for each brain cell
- By age three, 80% of the connections are already made, forming neural networks



Brain Vocabulary

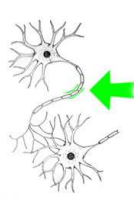
Dendrites



Axon



Myelin Sheath



The Great Divide

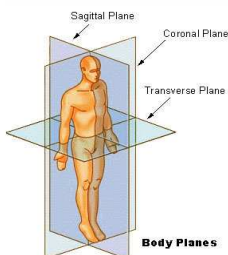
The CORPUS CALLOSUM – the tissue dividing the two hemispheres of the brain

- It's important for transmission of information between hemispheres
- Physical movements crossing the midline need to be introduced



Crossing the Midlines

- left/right
- top/bottom
- front/back



Brain Activities

Let's do a few brain activities!



Crossing Midlines



♪ Toss & Catch
By Angela Russ



Dance is a natural partner to music with many "cross lateral" moves.

Crossing Midlines



♪ Two Carrot Sticks



Young Brains are Very Busy!



Young children need
GOOD NUTRITION
and **WATER**
for healthy development



Repetition is Important

- Repetition provides consistent and multi-sensory learning experiences that strengthen brain connections
- Cognitive understanding develops with an increased ability to retrieve information quicker and in new situations



The School Connection



Educating the Whole Child and Reducing Childhood Obesity

Source: National Association of School Boards, December 2004

School accounts for a major part of a child's day.

"Whether a child is at school during the day or for an extended day that includes after-school care or activities, there are numerous opportunities to learn about and participate in physical activity and healthy eating."

Think Integration!

Integrating Academics, Motor Development, and Brain Based Learning

Games Science Math
 Jump Rope Health NUTRITION
 Scarf Play Spelling Social Skills
 PATTERNING

Connecting to the Classroom




Describe your scarf

Opposites Is it **light** or **heavy**?
 Is it **rough** or **smooth**?
 Is your prop **quiet** or **noisy**?
 Does it fall **fast** or **slow**?



Math/Shapes



Square Triangle Circle

Body Part Identification

Balance the scarf on:

Hand
 Back
 Head
 Foot



Where else can you balance the scarf?

Patterns


Create Scarf Movement Patterns

A-B pattern:
 around your back, over your head

A-B-C Pattern:
 around your back, over your head,
 under your leg

Can you make a new pattern?

Scarf Patterns

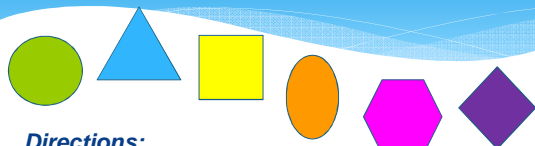


Directions:

- Find a team of 6
- Make a shape pattern with your scarves
- Demonstrate the pattern with your body



Macarena Scarf Pattern



Directions:

- Make a sequence of 6 actions
- Practice your sequence in your group
- Practice with music
- Combine with another group, teach them your sequence (now you have 12 moves)
- Demonstrate all 12 moves with music

Sorting Time

Can you get into groups of the same colors?



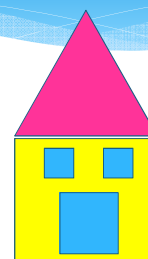
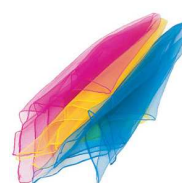
Scarf Graphing

Math
Connections!



Scarves + Geometry = ?

Scarf Drawing!



Remember This Song?

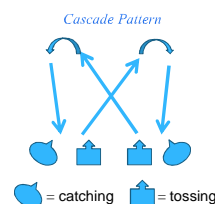
♪ Toss and Catch

- Hand-eye development
- Cognitive / Physical communication
- Eye strengthening muscles used for tracking
- It's a Precursor to juggling



Beginning Juggling

Find a partner with a different colored scarf
Toss in an X pattern More juggling later....



BEST PRACTICES What? Why? How?



Research Tells Us...



Children are **not** meeting **daily recommendations** for **physical activity**, children spend **70% to 87%** of their time in early care and education **being sedentary**, i.e., sitting or lying down.

Children are **sedentary 83% of the time**, excluding nap time.

Children may only spend about **2% to 3% of time** being **moderately** or **vigorously** active.

<http://cfoc.nrckids.org/WebFiles/PreventingChildhoodObesity2nd.pdf>

Best Practice

provides us with research and guidelines so that we may better serve children.



Appropriate Practices in Movement Programs

- Facilitate maximum participation
- Design active learning environments
- Develop movement skills and concepts
- Plan for repetition and variation of practice
- Practice at a high rate of success
- Make fitness a by-product of play

Additional Strategies for Success



- Teach a variety of childhood games
- Eliminate "elimination games"
- Minimize waiting
- Don't allow children to pick teams
- Never remove PA for punishment
- Controlled chaos - get 'em moving
- Always supervise!

And.....



- Be prepared
 - Facilities, equipment, whistle
- Know your game plan
 - Expect children to challenge you
- Be flexible
 - Inclement weather, facility restrictions
- Organize quickly and efficiently



Organizational Techniques:

- Instant Activity – Get ‘em moving
- Boundaries and Routines
- Partners
- Groups
- Teams



Let's put these techniques into action!

Active Physical Play

Disguising Fundamental Motor Skills in FUN Activities!



Tag...You're It!

How many tag games do you know?



Tag Games:

Exchange Tag
Freeze Tag/Tunnel Tag
Crazy Doctor Tag
Amoeba Tag
Add-On Tag
Crows and Cranes

AKA: Anytime or Sometime



Use different locomotor skills!

All Tied Up!

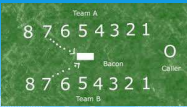
Cooperative Skills ➡ A Life Skill!




Straddleball



Steal the Bacon



↓



A Newer Version:
"Super Circulation"

Stations

Make them fun
Keep the rotation time short
Add the school connection!

Station Instructions

- ☐ Choose a station, keep stations evenly numbered (some activities require pairs)
- ☐ Read directions quickly and play activity
- ☐ Think about the school connection (cognitive development, social skills, academic subjects, nutrition, etc.)
- ☐ Listen for cue to move - replace any needed equipment for the next group
- ☐ Move to next station quickly and begin again

Applying Modifications with School Aged Children

HOW?
WHAT?
WHEN?
WHERE?
WHY?

Considerations

- Gender
- Number of children
- Overweight or obese children
- Group characteristics
 - Overly competitive/aggressive
 - Cultural diversity
- Training of staff
- Game knowledge
- Facility/equipment/space



School Age Children and PA

Recognize that all games and activities won't work every day and every time with every group.

Realize that children will test the limits, be ready to anticipate what they might do or be able to adapt quickly.

Evaluate the game, the equipment, the play area, the rules, and age-appropriateness, as needed.

Children with Disabilities

Recognize that all children, regardless of ability or disability, can acquire motor skills and use their bodies in play.

Children with special needs require adults who are energetic and creative in supporting play.

Look at what a child CAN do, not at what they cannot do.



Authentic Assessment



Authentic Assessment



Duck, Duck, Goose

**In a small group, discuss:
How can you modify this game?**



A new twist on an old game:

Banana, Blueberry, Fruit Salad

Duck, Duck, Goose on the Move



Kickball



**In a small group, discuss:
How can you modify this game?**



Physical Activity Policy

Do you have one?



Policies Make a Difference

- * Provide clear guidelines to staff
- * Influence day-to-day practices
- * Promote consistency of healthy practices
- * Bring current research and best practices into daily routines

A policy is a statement of commitment!

Physical Activity Policy

Does your policy contain specific minutes of daily M-V-P-A?

Is it developmentally and age-appropriate?

Is it inclusive – do all children participate?

When was it last updated?

Does it work?



Policy Considerations:

- ✓ Variety of Game Opportunities
- ✓ M-V-P-A
- ✓ Staff Participation
- ✓ Age-appropriate
- ✓ Safety
- ✓ Facility
- ✓ Equipment
- ✓ Inclusive/Special Needs
- ✓ Staff Training
- ✓ Social Skills
- ✓ Sedentary Time
- ✓ Media Time
- ✓ Routines
- ✓ Disciplinary Actions
- ✓ Withdrawal of play as Punishment

When Developing Policy Statements

- Identify areas of need
- Develop an action plan
- Identify timelines and roles
- Use researched based information from credible sources
- Use simple language
- Use strong verbs in statements



Strong vs. Weak Policies

Strong	Include words such as:	Weak
Shall		Should
Will		Might
Must		Encourage
Require		Promote
Comply		Some
Enforce		Try

Sample Policy Statements

Which one is the weak statement?

Adults shall supervise all indoor and outdoor physical activity at all times

Adults will not withhold physical activity as punishment

Adults will encourage children not to use electronic equipment in the program

Group Activity



To Wrap Things Up...



Plant a seed...



... For a Lifetime of Physical Activity!

Thank You!

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Have a fun and fit day!